

Mathematics A1 Schedule

2010/2011/1

| No. week | | Topics | |
|----------|--|---|---------|
| 1 | 09. 6. Mo 09. 7 Tue 19.10. Fri | Introduction to complex numbers. Operations, solving equations Complex numbers (cont.) Complex numbers (cont.) | Quiz 1 |
| 2 | 09. 13. Mo 09. 14 Tue 09.17. Fri. | Vectors in 3-space NO CLASS (University day) Lines and planes in 3-space | Quiz 2 |
| 3 | 09. 20. Mo 09. 21. Tue 09. 24.. Fri | Lines and planes in 3-space (cont.) Numerical sequences. Numerical sequences | Quiz 3 |
| 4 | 09. 27. Mo 09. 28. Tue 10. 01. Fri | Elementary functions, inverse function Inverse trig functions , Hyperbolic functions and their inverses Limit of functions | Quiz 4 |
| 5 | 10. 04. Mo 10. 05. Tue 10. 08. Fri | Limit of functions (cont.) Continuity. Derivation, rules of differentiation. | Quiz 5 |
| 6 | 10. 11. Mo 10. 12. Tue 10. 15. Fri | Derivatives of elementary functions Practice MIDTERM TEST 1 | |
| 7 | 10. 18. Mo 10. 19. Tue 10. 22. Fri | Mean value Theorem L'H rule. Extremal values, concavity. Curve sketching | |
| 8 | 10. 25. Mo 10. 26. Tue 10. 29. Fri | Curve sketching Optimization Derivation of impicately given functions | Quiz 6 |
| 9 | 11. 01. Mo 11. 02. Tue 11. 05. Fri | NO CLASS (day off, national holiday) Derivation of parametrized curves Taylor-polinomial, Taylor's theorem | Quiz 7 |
| 10 | 11. 08. Mo 11. 09. Tue 11. 12. Fri | (cont.) Indefinite integral Integration by parts, rational fractions | Quiz 8 |
| 11 | 11. 15. Mo 11. 16. Tue 11. 19. Fri | Integration by substitution. Practice of integration techniques Definite integral. Applications: area of region between curves, arc length | Quiz 9 |
| 12 | 11. 22. Mo 11. 23. Tue 11. 26. Fri | Practice Practice NO CLASS (open day for high school students) | |
| 13 | 11. 29. Mo 11. 30. Tue 12. 03. Fri | MIDTERM TEST 2 More applications of Definite integrals: surface area, volume of solids of rotation, centroid of regions Improper Integrals | |
| 14 | 12. 06. Mo 12. 07. Tue 12. 10. Fri | Improper integrals (cont.) (cont) REP. TEST | Quiz 10 |

Sept. 4th , 2010

Dr. Anikó Csákány